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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,969	07/01/2003	Lewis J. Daly	054_009	1467

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EXAMINER

BEISNER, WILLIAM H

ART UNIT PAPER NUMBER

1744

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/610,969

Applicant(s)

DALY, LEWIS J.

Examiner

William H. Beisner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipp GMBH (DE 20202722) in view of Phillips et al.(US 6,019,810).

The reference of Lipp GMBH discloses a method for removing H<sub>2</sub>S from methane that includes providing a reactor cartridge (9) that includes an outer housing (28,10) and includes a gas inlet (11), gas outlet (12), water inlet (13) at one end thereof and a water outlet (17) at the opposite end thereof, and a source of microorganisms (19) on a support material contained within the housing. The method includes the steps of passing a stream of methane (11) which contains hydrogen sulfide through gas inlet (11) and through the microorganisms. The treated methane is then passed through gas outlet (12) for storage (8).

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Claim 15 differs by reciting that the microorganisms are supported on a particulate carrier medium while the device of Lipp GMBH employs a support medium (19) with bristles (20).

The reference of Phillips et al.(US 6,019,810) discloses that is it conventional in the art to support microorganisms within a biofilter device using particulate carrier medium (24) (See column 1, lines 18-27).

In view of this teaching and in the absence of a showing of criticality and/or unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ particulate carrier medium in the system of the reference of Lipp GMBH for the known and expected result of providing an alternative means recognized in the art to achieve the same result, providing a support surface for contacting the microorganisms with a gas and liquid while providing increased contact surface area.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipp GMBH (DE 20202722) in view of Phillips et al.(US 6,019,810) taken further in view of Jutzi (US 5,407,470) and Walter (US 4,421,534).

The combination of the references of Lipp GMBH and Phillips et al. has been discussed above.

While the reference of Lipp GMBH discloses closing the top open end of the filter housing (28) with housing (10) that includes a gas inlet, gas outlet and a water inlet, the reference does not disclose that the housing (10) includes an inlet fan.

The reference of Jutzi discloses that it is known in the art to provide the gas inlet of a biological air filter with an inlet fan (6).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the system of the primary reference with an inlet fan as suggested by the reference of Jutzi for the known and expected result of providing an art recognized means for creating the gas flow required for moving the gas stream through the biofilter housing.

While the housing (28) of the reference of Lipp GMBH includes a water reservoir (15) located at its bottom, the reference does not show the reservoir as a separate element with respect to the housing (28).

The reference of Walter discloses that it is known in the art to provide a biofilter housing (See the Figure) as a separate component relative to a water reservoir space (12).

In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the water reservoir of the primary reference as a separate structural element as is conventional in the art and evidenced by the reference of Walker. Note it is not considered to be an inventive step to make an integral structure of separable parts (See *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961)).

With respect to the location of the gas inlet (11) and vertical inlet tube (12), the reference of Lipp GMBH discloses the use of a centered tube (11,26) (See Figure 5).

### ***Response to Arguments***

5. With respect to the rejection of claim 15 under 35 USC 102 over the reference of Lipp GMBH, Applicant argues (See page 5 of the response dated 7/12/05) that, as amended, claim 15 defines over the reference of Lipp GMBH because the reference of does not teach or suggest the

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combination of inlets and outlets, the resultant flow of gases and water through the system and the particulate carrier.

In response, the Examiner is of the position that the reference of Lipp GMBH indeed discloses the claimed combination of inlets and outlets and the resultant flow of gases and water through the system. As stated in the new grounds of rejection above, the reference does not disclose the use particulate carrier medium. However, this difference has been addressed by the combination of the reference of Lipp GMBH and Phillips et al.

6. With respect to the rejection of claim 14 under 35 USC 103 over the combination of the references of Lipp GMBH, Jutzi and Walter, Applicant argues (See pages 5-6 of the response dated 7/12/05) that, as amended, claim 14 defines over the combination because of the location of the center tube and function and flow of the water and gas through the system and the claimed particulate carrier medium.

In response, the Examiner is of the position that the combination of the references indeed discloses the claimed combination of elements as recited in claim 14 with the exception of the particulate carrier medium. However, this difference has been addressed by the combination of the reference of Lipp GMBH and Phillips et al. Note, Figure 5 shows gas inlet (11) tube positioned within the center of the housing of Lipp GMBH.

### ***Conclusion***

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7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

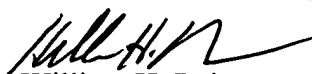
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Beisner whose telephone number is 571-272-1269. The examiner can normally be reached on Tues. to Fri. and alt. Mon. from 6:15am to 3:45pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Beisner  
Primary Examiner  
Art Unit 1744

WHB